

Patent Claims

1. A method for administering a composition by inhalation comprising administering to a patient the composition, contained in a capsule comprising a longitudinal axis and a
5 transverse axis which is shorter in relation to the longitudinal axis and which is intended to accommodate the composition in the form of a powder, in a powder inhaler, wherein the features forming the outer contour of the capsule are symmetrical with respect to a transverse plane which bisects the longitudinal axis, the following features being excluded from the conditions of symmetry:
- 10 - fine structures of the seams which are produced by the sealing of the seams of the individual parts of the capsule, and/or
 - elements formed on the capsule surface which are smaller than 0.1 mm, and/or
 - angles of taper up to 5°.
- 15 2. The method according to claim 1 wherein the inhaler is a Bernoulli inhaler.
3. The method according to claim 1 wherein features located on the outer contour of the capsule surface and forming a symmetrical pair may have a tolerance and inaccuracy deviating from the symmetry of 0.15 mm in each case.
- 20 4. The method according to claim 1 wherein the capsule has elevations on its outer surface.
5. The method according to claim 1 wherein the capsule has no elevations.
- 25 6. The method according to claim 1 wherein the capsule consists of two parts which can be pushed telescopically one inside the other along the longitudinal axis.
7. The method according to claim 1 wherein the capsule has a cylindrical outer
30 contour.

8. The method according to claim 7 wherein the capsule has tapering sealed ends.
9. The method according to claim 6 wherein the seam created between the two parts of the closed capsule is offset from the center by 0 to 12% of the outer longitudinal
5 length.
10. The method according to claim 1 wherein the capsule comprises a member of the $D_{\infty h}$ symmetry group in terms of its outer contour, irrespective of the seam between the two parts of the capsule and irrespective of any manufacturing tolerances.
- 10 11. The method according to claim 1 wherein the inhaler comprises two housing parts, an upper housing part which is connected to a mouthpiece, and a lower housing part with at least one capsule chamber, the capsule chamber(s) having an air inlet opening, and an air outlet opening connected to the mouthpiece via a connection capable
15 of conducting an aerosol, powder or liquid.
12. The method according to claim 11 wherein the capsule chamber has a cross section 1.1 to 2.5 times as great as the capsule diameter and a length 1.02 to 2 times the
20 length of the capsule.
13. The method according to claim 11 wherein the inhaler has a cutting device comprising at least two sharp spikes and/or cutters, the spikes and/or cutters being capable of breaching the capsule chamber(s).
- 25 14. The method according to claim 11 wherein the inhaler comprises: a) a cup-shaped lower part open at the top, b) a plate which covers the opening of the lower part and perpendicularly to which is formed a pharmaceutical capsule chamber of the type described above, a button movable counter to a spring on the capsule chamber, a cutting device comprising two sharp spikes or cutters for opening the capsule, c) an upper part
30 with the mouthpiece which is connected to the capsule chamber so as to be able to convey a powder, aerosol or liquid, and d) a lid, the elements a), b) c) and d) being

joined together by a common hinge element such that they can be moved back and forth relative to one another.

15. The method according to claim 11 wherein inhaler contains a magazine of capsule
5 chambers.

16. An inhaler for administering a composition comprising an upper housing part which is connected to a mouthpiece and a lower housing part with at least one capsule chamber, the capsule chamber(s) having an air inlet opening, and an air outlet opening
10 connected to the mouthpiece, wherein at least one capsule chamber is capable of accommodating a capsule having a longitudinal axis and a transverse axis which is shorter in relation to the longitudinal axis wherein a composition is placed, the features forming the outer contour are symmetrical with respect to a transverse plane that bisects the longitudinal axis, the following features being excluded from the conditions of
15 symmetry:

- fine structures of the seams which are produced by the sealing of the seams of the individual parts of the pharmaceutical capsule, and/or
- elements formed on the capsule surface which are smaller than 0.1 mm, and/or
- angles of taper up to 5°.

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17. A capsule for holding a pharmaceutical composition which, in the closed state, has a longitudinal axis and a transverse axis which is shorter in relation to the longitudinal axis and which consists of two parts which can be pushed telescopically inside one another along the longitudinal axis, wherein the features forming the outer
25 contour of the closed capsule are symmetrical with respect to a transverse plane which bisects the longitudinal axis, the following features being excluded from the conditions of symmetry:

- fine structures of the seams which are produced by the sealing of the seams of the individual parts of the capsule, and/or
- 30 - elements formed on the capsule surface which are smaller than 0.1 mm, and/or

- angles of taper up to 5° .

18. The capsule according to claim 17 wherein the seam created between the two parts when the capsule is closed is offset from the center by 0 to 12% of the outer
5 longitudinal length.

19. The capsule according to claim 17 wherein the capsule comprises a member of the $D_{\infty h}$ symmetry group in terms of its outer contour, irrespective of the seam between the two parts of the capsule and irrespective of any manufacturing tolerances.

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20. The capsule according to claim 17 wherein features located on the outer contour of the capsule surface and forming a symmetrical pair may have a tolerance and inaccuracy deviating from the symmetry of 0.15 mm in each case.